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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,185	04/15/2004	Steven M. Zuniga	2834C2-303003	9780

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FISH & RICHARDSON P.C.  
P.O. BOX 1022  
MINNEAPOLIS, MN 55440-1022

EXAMINER
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CULBERT, ROBERTS P

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/826,185

Applicant(s)

ZUNIGA ET AL.

Examiner

Roberts Culbert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Terminal Disclaimer***

The terminal disclaimer filed on 3/29/06 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 6,251,215 or any patent granted on U.S. Patent Application serial number 09/848,630, has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-3, 5-7, 10-22 and 25-31 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,068,548 to Vote et al.**

Regarding Claims 1, 17 and 29, Vote et al. teach a method of polishing comprising holding a substrate (102) on a substrate mounting surface (106) that is vertically movable relative to a rigid base of a carrier head in a CMP apparatus; bringing the substrate into contact with a polishing surface and creating relative movement between the polishing surface and the substrate and maintaining the substrate beneath the substrate mounting surface with a retaining ring (117) comprising; a generally annular lower portion (402) having a bottom surface for contacting a polishing pad during polishing, the lower portion made of plastic; and a generally annular upper portion (406) having a bottom surface secured to the lower portion and a top surface configured to be mechanically affixed to and abut a rigid

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base of a carrier head, wherein the upper portion is made of a metal which is more rigid than the plastic.

(Col. 3, Line 45 – Col. 4, Line 7)

Regarding Claim 2, Vote et al. teach dispensing slurry (108) onto the polishing surface.

Regarding Claim 3, Vote et al. teach pressing the substrate against the polishing surface.

Regarding Claims 5 and 6, Vote et al. teach rotating the carrier head and polishing surface.

Regarding Claims 10-12 and 25-27, Vote et al. teach that the plastic is polyphenylene sulfide (PPS) and the metal is stainless steel.

Regarding Claims 7, 13, 22, and 28, the various recited limitations are inherent material properties of stainless steel and polyphenylene sulfide (PPS)

Regarding Claims 14-16 and 18, 20 and 21 Vote et al. teach that the upper and lower portions may be attached with screws, adhesive or press fit (snap lock). See (Col. 4, Lines 1-3).

Regarding Claim 19, Vote et al. teach a slow curing epoxy (3M D460).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 8, 9, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.**

**Patent 6,068,548 to Vote et al.**

Regarding Claims 4, 5, 16, 17 and 25, Vote et al. does not expressly teach the thickness of the plastic retaining ring is 100-400 mils, or that the upper portion is thicker than the lower portion.

However, it has been held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably

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distinct from the prior art device. *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984)

**Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,068,548 to Vote et al. in view of U.S. Patent 5,624,299 to Shendon.**

As applied above, Vote et al. teaches the method of the invention substantially as claimed, but does not expressly teach pressurizing a chamber in the carrier between the substrate mounting surface and base. However, Shendon teaches pressurizing a chamber (364) in the carrier between the substrate mounting surface and base in order to eliminate localized overpolishing. It would have been obvious to one of ordinary skill in the art at the time of invention to use the pressurizing chamber of Shendon to press the substrate and polishing surface of Vote et al. together in order to eliminate localized overpolishing as taught by Shendon.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberts Culbert whose telephone number is (571) 272-1433. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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R. Culbert  
Examiner  
Art Unit 1763



Parviz Hassanzadeh  
Supervisory Patent Examiner  
Art Unit 1763